

IODD device description for Capacitive Sensor Series KAS-80-26

Version: 1.0
 Release Date: 11.07.2019
 Copyright: Rechner Industrie-Elektronik GmbH

KAS

Vendor ID: 1129d/0469h
 Vendor Name: Rechner Industrie-Elektronik
 Vendor Text: www.rechner-sensors.com
 Vendor URL: <https://www.rechner-sensors.com/dokumentation/io-link>
 Device ID: 1d/000001h

Communication

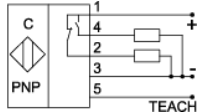

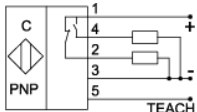

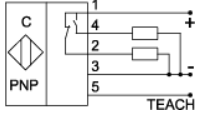

IO-Link: V1.2
 Bitrate: COM3
 Minimum Cycle Time: 1 ms
 SIO Mode Supported: Yes

Features

Block parametrization: Yes
 Data storage: Yes

Device Variants

<p>KA1533</p>	<p>Capacitive Sensos, Series 80-26, KAS-80-26/113-A-PEEK-IOL-Y10-ETW-HP</p>		
<p>KA1534</p>	<p>Capacitive Sensor, Series 80-26, KAS-80-26/113-A-PTFE-IOL-Y10-ETW-HP</p>		
<p>KA1589</p>	<p>Capacitive Sensor, Series 80-26, KAS-80-26/200-A-G1-PTFE-IOL-Y10-ETW-HP</p>		

KA1590	Capacitive Sensor, Series 80-26, KAS-80-26/113-A-TRI-PTFE-100C-IOL-Y10-ETW-HP		
KA1591	Capacitive Sensor, Series 80-26, KAS-80-26/113-A-G1-PTFE-100C-IOL-Y10-ETW-HP		
KA1603	Capacitive Sensor, Series 80-26, KAS-80-26/113-A-F30-PTFE-100C-IOL-Y10-ETW-HP		

*** depends on the product

Variables

Name	Description	Index	Subindex, BitOffset	Data type	(max) Length	Access Rights	Default	Value (range)	Gradient	Offset	Unit
Standard command		2	Sub0	UInteger	8 Bit	wo					
Empty adjustment								65		0	
Full adjustment								75		0	
Reset	Restore Factory Settings							130		0	
Function test on	BDC1 switch pulsating							180		0	
Function test off								181		0	
PDV correction1	Run PDV correction1							190		0	
PDV correction2	Run PDV correction2							191		0	
PDV correction1	Clear PDV correction1							192		0	
PDV correction2	Clear PDV correction2							193		0	
PDV correction enable	Enable PDV correction							194		0	
PDV correction disable	Disable PDV correction							195		0	
IO-Link 1.1 Test A	Command triggers Event 8DFE to appear							240		0	
	Command triggers Event 8DFE to disappear							241		0	
IO-Link 1.1 Test B	Command triggers Event 8DFF to appear							242		0	
	Command triggers Event 8DFF to disappear							243		0	
Device Access Locks		12	Sub0	RecordT	16 Bit	rw					
Data storage	Parameter Synchronization between Master and Device		1	BooleanT	1 Bit		0	0=unlock, 1=locked			

Local Parameterization	Teach-in function (ET) lock		2	BooleanT	1 Bit		0	0=unlock, 1=locked			
Vendor Name	Rechner Industrie-Elektronik	16	Sub0		32 Byte	ro				0	
Vendor Text	www.rechner.de	17	Sub0		32 Byte	ro				0	
Product Name	KA***	18	Sub0		32 Byte	ro				0	
Product ID	KA***	19	Sub0		32 Byte	ro				0	
Product Text	KAS	20	Sub0		32 Byte	ro				0	
Hardware Version	FBG***	21	Sub0		32 Byte	ro				0	
Firmware Version	CSW***	23	Sub0		16 Byte	ro				0	
Application Specific Tag		24	Sub0		16 Byte	rw				0	
Teach Channel	Standard TeachIn Channel (BDC1)	58	Sub0	UInteger	8 Bit	rw	1	1=BDC1			
Teach State	TeachIn State (BDC1)	59	Sub0	UInteger	4 Bit	ro		0 to 15		0	
Teach State 0	Idle							0			
Teach State 4	Wait for command							4			
Teach State 5	Busy							5			
Teach State 7	Error							7			
Teach State 12	Empty adjustment Success							12			
Teach State 13	Full adjustment Success							13			
SP	Smart Sensor Profile: BDC switchpoints	60		RecordT	32 Bit	rw					
Switchpoint 1	Setpoint of BDC1 (SP.Lo)		Sub1	UIntegerT	10 Bit			0 ... 1023		16	
Switchpoint 2	Setpoint of BDC2		Sub2					(not used)			
SP	Smart Sensor Profile: BDC switchpoints configuration	61		RecordT	32 Bit	rw					
Switch point logic	logic		Sub1	UIntegerT	8 Bit		0	0=Normally open (NO), 1=Normally closes (NC)		24	
Switch point mode	Fctn		Sub2	UIntegerT	8 Bit		1	1=Single Point		16	
Hysteresis	HY		Sub3	UIntegerT	16 Bit		0	0 ... 1023	1	0	
PDV limits	Process data value limits	64		RecordT	32 Bit	ro					
PDV Min			Sub1	UInteger	16 Bit		0		1	16	
PDV Max			Sub2	UInteger	16 Bit		1023		1	0	
dAP	Damping process value PDV	74	Sub0	UIntegerT	16 Bit	rw	0	0 to 2.000	1	0	ms
dS	Switch-on delay both BDC	76	Sub0	UIntegerT	16 Bit	rw	0	0 to 60.000	1	0	ms

dr	Switch-off delay both BDC	78	Sub0	UIntegerT	16 Bit	rw	0	0 to 60.000	1	0	ms
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ServiceModePassword	de-/activate PDV correction commands	200	Sub0	RecordT	32 Bit	wo	0	0 to 4.294.967.295	1	0	
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PDV correction state		80	Sub0	UIntegerT	16 Bit	ro	0	1 = PDV correction1 complete, 2 = PDV correction2 complete, 3 = correction enabled		0	
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Events

Event codes (HEX/Dez)	Name	Type	Description
18 50 / 6224	Data Flash error	Error	Read-error or Write-error
18 51 / 6225	Meas-value overvoltage detected	Warning	Noise detected or Device defect
18 70 / 6256	Function test	Notification	Event appears by setting index 2 to value 180, Event disappears by setting index 2 to value 181
8D FE / 36350	IO-Link 1.1 Test A	Error	Event appears by setting index 2 to value 240, Event disappears by setting index 2 to value 241
8D FF / 36351	IO-Link 1.1 Test B	Error	Event appears by setting index 2 to value 242, Event disappears by setting index 2 to value 243

Error codes (HEX/Dez)	Name	Description
80 00 / 0	application error	Device application error (no details)
80 11 / 17	Index not available	Access to a non-existent index
80 12 / 18	Subindex not available	Access to a non-existent subindex
80 20 / 32	Service temporarily not available	The parameter is currently not accessible. The device does not allow this in the current state.
80 21 / 33	Service temporarily not available	Write access to a read-only parameter
80 23 / 35	Access denied	Denied access to a read-only parameter
80 30 / 48	Parameter value out of range	The written parameter value is outside the permissible value range
80 31 / 49	Parameter value above limit	Written parameter value is larger than allowed
80 32 / 50	Parameter value below limit	Written parameter value is smaller than allowed
80 33 / 51	Parameter length overrun	Written parameter length too large
80 34 / 52	Parameter length underrun	Written parameter value too small
80 40 / 64	Invalid parameter set	Written single parameter set collides with other parameter settings (for example, if the hysteresis parameter exceeds the

80 41 / 65	Inconsistent parameter set	Device plausibility check failed due to an inconsistent parameter set
80 82 / 130	Application not ready	Access was denied because the device is currently not ready

Process data / Process data input

Name	Description	Index	Subindex, BitOffset	Data type	(max) Length	Access Rights	Def- ault	Value (range)	Gradi- ent	Off- set	Unit
Process value	PDV, Current process value		6	IntegerT	10 Bit	r		0 ... 1023	1	0	
BDC1 switching state	State depends on settings for BDC1		0	BooleanT				0=inactive (off), 1=active (on)			

Process data structure	PDV and BDC
Bit(s)	Description
0	BDC1
1 - 5	not used
6	PDV_Bit0
7	PDV_Bit1
8	PDV_Bit2
9	PDV_Bit3
10	PDV_Bit4
11	PDV_Bit5
12	PDV_Bit6
13	PDV_Bit7
14	PDV_Bit8
15	PDV_Bit9